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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

09/380,187

Applicant(s)

YAMAGUCHI ET AL.

Examiner

JAMES A. FLETCHER

Art Unit

2621

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C2)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 15 December 2008 regarding ongoing claim language have been fully considered but they are not persuasive.

In re page 9, Applicant's Representative states: "the Examiner has taken the position that the header separation circuit 22 of Fujinami corresponds to both of the claimed 'matching status information outputter' and 'data formatter.' Applicants respectfully submit that such a position is clearly improper."

The Examiner respectfully disagrees. In modern design, it is normally considered beneficial for an element to provide multiple functions, and a device that outputs data providing a formatting function for that data output is to be expected by one of ordinary skill in the art. The Examiner believes that an explicit claim recitation of how the data formatter functions could overcome the cited prior art rejection.

Further in re page 9, Applicant's Representative states: "Applicants kindly request that the Examiner clarify which data of Fujinami is being interpreted as the 'predetermined data.'"

In response, the Examiner notes that the broadly claimed "predetermined data" can correspond to nearly any data in the reference that is not being newly generated by the invention. The Examiner believes that an explicit claim recitation of the nature of the predetermined data could overcome the cited prior art rejection.

In re pages 9 and 10, Applicant's Representative states: "Applicants respectfully note that the output of such stream ID values is not in any way whatsoever dependent

upon whether or not a sequence of input code is judged to be a part of a packet start code. As such, Applicants submit that Fujinami does not disclose or suggest a data formatter operable to output predetermined data in accordance with the matching status information when the sequence of input code is judged not to be a part of the packet start code but to be a part of a particular sequence of coded data, and not to output predetermined data when the sequence of input code is judged to be a part of the packet start code."

Again, the Examiner respectfully disagrees. Since the invention of Fujinami explicitly discloses separating the various headers from the signal stream, it clearly determines whether the data it is analyzing is part of a start code or not. Also, since Fujinami explicitly discloses routing those headers to the control circuits, it clearly does not output that data when it is judged to be a part of the packet start code.

The Examiner believes he is correct in interpreting the broadly defined terms as "predetermined data" and "packet start code" as being met by the cited disclosures in Fujinami. He also believes that claiming those features of the instant invention in such a manner as to distinguish them from the disclosure of Fujinami would overcome the cited prior art reference.

In re page 10, Applicant's Representative states: "claim 1 has been amended herein so as to recite that the particular sequence of coded data and the packet start code have the same prefix code consisting of plural bytes. Applicants respectfully submit that Fujinami does not disclose or suggest such a feature.

Applicant's argument has been considered but is moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 10 and 21 are rejected under 35 U.S.C. 103(a) as being anticipated by Fujinami et al (5,568,274) and further in view of Hashimoto et al (JP 05-110575).

Regarding claim 1, Fujinami et al disclose a coded signal reproduction apparatus for reproducing coded data included in a plurality of packets, wherein a packet start code indicating a packet boundary between a subsequent packet is placed at a head portion of each packet (Col 2, lines 1-2 "The entry packet begins with a Packet_Start_Code_Prefix"), said coded signal reproduction apparatus comprising:

- a matching status information outputter operable to detect whether a sequence of input code is a part of the packet start code, and to output the detection result as matching status information (Col 15, lines 13-16 "The header separation circuit 22 in the separation circuit 21 separates pack headers, packet headers and entry packets from the signal read out from the DSM 10 and supplies them to the control circuit 24"); and
- a data formatter operable to output predetermined data in accordance with the matching status information when the code is judged not to be a part of

the packet start code but to be a part of a particular sequence of coded data (Col 15, lines 13-16 "The header separation circuit 22 in the separation circuit 21 separates pack headers, packet headers and entry packets from the signal read out from the DSM 10 and supplies them to the control circuit 24"), and not to output the predetermined data when the sequence of input code is judged to be a part of the packet start code (Col 15, lines 16-18 "The remaining time-division multiplexed signal is supplied to the input terminal G of the switching circuit 23");

Fujinami et al disclose a sequence of coded data and the packet start code having similar patterns as discussed in the previous Office Action, but do not explicitly disclose the particular sequence of coded data and the packet start code having the same prefix code consisting of plural bytes.

Hashimoto et al teach a multiplex transmission scheme wherein the same prefix code having multiple bytes is sensed by a matching status information outputter (Paragraph 0011 "Even if the special code a and identical codes of SOM continue after SOM, the above-mentioned bit pattern b is a rising edge of the above-mentioned bit pattern b, and it is arranged so that each major node may retake a synchronization and can prevent a synchronous gap").

As taught by Hashimoto, the ability to determine a packet start code from other code having the same prefix code is well known, and prevents decoding errors.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujinami in order to provide the ability to detect sequence codes having the same prefix code consisting of plural bytes.

Regarding claim 10, Fujinami et al disclose a coded signal reproduction apparatus wherein the sequence of input code is a coded and multiplexed signal in which audio, video, and reproduction information annexed thereto are multiplexed (Fig 13 shows audio and video signals multiplexed into a data stream, and Fig 14 shows several reproduction information data in the same stream).

Regarding claim 21, Fujinami et al disclose a coded signal reproduction apparatus wherein the matching status information outputter includes a head code detection unit operable to receive the sequence of input code in units of a predetermined bit length (Col 15, lines 13-16 "The header separation circuit 22 in the separation circuit 21 separates pack headers, packet headers and entry packets from the signal read out from the DSM 10 and supplies them to the control circuit 24" and Col 2, lines 7-8 "The Packet_length (16 bits) indicates the length of the packet following it"), and to determine whether a current input code of the sequence of input code matches a current code of the packet start code (Col 12, lines 36-39 "The entry packet begins with a Packet_Start_Code_Prefix, followed by a stream_ID of 0xBF in hexadecimal notation, and the length of the packet" and Col 12, lines 44-47 "Following the ****_id, the ****_packet_type is disposed, which identifies the packet type from among the private packet types belonging to the identified party").

4. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination as applied to claim 1 above, and further in view of Toyohara (5,768,265).

Regarding claim 5, Fujinami et al disclose a coded signal reproduction apparatus comprising:

- header analyzer operable to analyze the header of the packet to output reproduction information when the input code sequence is coded video data (Col 3, lines 12-15 "The header separation circuit 22 supplies the headers to the control circuit 24, and supplies the multiplexed signal to the input terminal G of the switching circuit 23").

Fujinami et al are silent on the topic of effectiveness of the data.

Toyohara teaches a data format means that inserts the reproduction information together with information indicating effectiveness of the reproduction information, in a predetermined position in the decoded video data (Col 8, lines 39-41 "the identifier discriminating circuit 410 analyses the identifier attached to the respective data to identify the effectiveness of the data").

As taught by Toyohara, effectiveness data lessens the burden on the processor by identifying packets that need not be decoded.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujinami et al in order to provide effectiveness data to the decoder.

Regarding claim 15, Fujinami et al disclose a coded signal reproduction apparatus wherein the sequence of input code is a coded and multiplexed signal in which audio, video, and reproduction information annexed thereto are multiplexed (Fig 13 shows audio and video signals multiplexed into a data stream, and Fig 14 shows several reproduction information data in the same stream).

5. Claims 8, 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujinami et al (5,568,274) in view of Yanagihara et al (6,172,989), and in further view of Movshovich et al (6,359,911).

Regarding claim 8, Fujinami et al disclose a coded signal reproduction apparatus comprising:

- an end code sequence detector operable to detect, from code sequences of coded data, a code sequence indicating the end of the coded data, the code sequence indicating the end of the coded data being located at the end of the coded data (Col 12, lines 17-19 "the multiplexed signal includes at least one pack, and an ISO_11172_end_code"); and
- a formatter operable to pad a data bus (Col 2, lines 19-20 "A padding_stream is used to increase the amount of data") when a code sequence indicating the end of the coded data is detected by said end code sequence detector (Col 12, lines 17-19 "the multiplexed signal includes at least one pack, and an ISO_11172_end_code");

Fujinami discloses padding data, but is silent regarding specific amounts of padding data.

Movshovich et al teach the padding of data with a predetermined amount so that the code sequence indicating the end of the coded data is forwarded to the next stage of a pipeline (Col 11, lines 25-30 "The local header serves a variety of purposes, including generating IEEE -1394 enable information, generating time stamp information for IEEE -1394 support, providing matched PID location information, padding the packets to align bytes to the memory controller's natural boundary [burst transfer]").

As taught by Movshovich et al, the addition of padding data to meet the requirements of a pipeline channel is well known, providing the channel with a known amount of data and simplifying data rate detection.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujinami et al in order to specify why the amount of data might be increased.

Fujinami et al disclose padding data to increase the amount of data, but is silent regarding reasons for increasing the amount of data.

Yanagihara teaches transfer of data in order to meet a predetermined bandwidth (Fig. 9 shows several bandwidths and the control thereof).

As taught by Yanagihara, controlling transfer of data in order to meet a predetermined bandwidth is well known, and allows the device to make efficient use of the available bandwidth without causing a bottleneck condition.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujinami in order to control the transfer of data in order to meet a predetermined bandwidth.

Yanagihara does not specifically disclose that it is always less than the data bus width of pipeline transfer, and that the coded data is transferred successively in a pipeline manner.

Movshovich et al teach controlling the data rate so that it is transferred successively in a pipeline manner (Col 9, lines 22-30 "The data is shifted into the transport stream pipeline 354 upon each occurrence of a shift clock after the PACKET_START signal has been detected as illustrated on line 356. The PACKET_START signal is propagated through the transport stream pipeline 354 as the transport packet propagates through the pipeline to signify the start of the transport packet. The transport stream pipeline allows the transport packets to be passed to the local header unit at the proper time").

As taught by Movshovich et al, pipelining data at a rate within the capacity of the pipeline is well known, widely used, and commercially available, allowing the transfer of data in accordance with the capacity of the system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujinami et al in order to provide pipeline transfer of data at a rate within the capacity of the pipeline.

Regarding claim 9, Fujinami et al disclose a coded signal reproduction apparatus comprising:

- a specific code sequence inserter operable to insert a specific code sequence in the last packet in a packet sequence before decoding (Col 17, lines 29-32 "The subcode is fed to the CRC encoder 81, Which calculates a CRC code, adds the CRC code to the end of the subcode, and feeds the result to the subcode synchronization pattern addition circuit 82");
- wherein the formatter is operable to add pseudo data to the rear of the specific code sequence (Col 2, lines 19-20 "A padding_stream is used to increase the amount of data").

Fujinami discloses padding data, but is silent regarding specific amounts of padding data.

Movshovich et al teach the padding of data with a predetermined amount so that the code sequence indicating the end of the coded data is forwarded to the next stage of a pipeline (Col 11, lines 25-30 "The local header serves a variety of purposes, including generating IEEE -1394 enable information, generating time stamp information for IEEE -1394 support, providing matched PID location information, padding the packets to align bytes to the memory controller's natural boundary [burst transfer]").

As taught by Movshovich et al, the addition of padding data to meet the requirements of a pipeline channel is well known, providing the channel with a known amount of data and simplifying data rate detection.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fujinami et al in order to specify why the amount of data might be increased.

Regarding claim 18, Fujinami et al disclose a coded signal reproduction apparatus wherein the sequence of input code is a coded and multiplexed signal in which audio, video, and reproduction information annexed thereto are multiplexed (Col 2, lines 9-16 "The packet data portion of each packet consists of a portion of the digital audio signal [when the stream type indicates an audio stream] or a portion of the video signal [when the stream type indicates a video stream]. Further, since each audio stream can have one of 32 different stream_IDs and the each video stream can have one of up to 16 different stream_Ds, up to 32 different audio signals and up to 16 different video signals can be multiplexed").

Allowable Subject Matter

6. Claims 2-4, 6-7, 12-14 and 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES A. FLETCHER whose telephone number is (571)272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAF
27 February 2009

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621